Progeny
Access Control

P3 SIM
3004 & 3004-IN
INSTALLATION & USER MANUAL

SAFETY NOTES

- Please read this manual carefully before attempting to install, program or operate the Progeny access control equipment.
- This equipment must be installed in line with all relevant regulations and standards.
- Make sure that wiring is rated according to fuses and current limits of relevant power supplies.
- Apart from the mains supply all connections to this unit must be SELV level. (Safety Extra Low Voltage, BS EN 60950 1992)
- No users should access inside the control box. The control box contains hazardous voltages and access is limited to qualified personnel only. All user programming for the controller is either done at one of the keyboards or at the PC.
- Every effort is made to ensure that this manual is complete and free from errors. However we reserve the right to make changes to these products and this manual without notice.
- No liability is accepted for loss damage or injury as a consequence of using these products or instructions.

Website: www.progeny.co.uk

Document Number:	MAN0005
Date:	27-03-2012
Issue:	03
Firmware Version Number:	1.04

CE

EMC & W

WEEE

Certificate Number
WEE/JG2915VS

© Copyright BSB Electronics Ltd 2012 All rights reserved.

1. INTRODUCTION 1

SOUND 2

2. PROGRAMMING 3

UNDERSTANDING THE PROGRAMMING FLOW CHARTS 4

3. USER MENU 5

SETTING DATE-TIME 6

SETTING THE DAY OF WEEK 7

3. ENGINEERS MENU 9

ENGINEERS PASSWORD 10

RESET USER PASSWORD 11

RESET USER PASSWORD 12

RESTORING FACTORY SETTINGS 12

RESTORING FACTORY SETTINGS 13

4. INSTALLATION 14

MOUNTING 14

POWER 14

Hardware System Diagram 16

SPECIFICATION 19

Quick Reference 20

Commissioning Information 20

1. INTRODUCTION

This Manual is for the Progeny P3 IO Controller, product code 3004 and 3004-IN. The 3004 controller has 16 inputs and 16 outputs, and the 3004-IN has 16 inputs only and is not supplied with a PSU. The built in charger-power supply for the 3004 is rated at 5A 12V DC . The P3 IO Controller is designed to be part of an online system centrally programmed via the Doors Enterprise software. Each controller has a real time clock and non-volatile event memory to allow for the system to continue operation even when isolated from the PC or remainder of the network. The controllers can connect via the interface lead direct to a COM Port on a PC.

PRODUCT CODE	DESCRIPTION
3004	P3 Input Output Controller
3004-IN	P3 Input Only Controller

SOUND

Sound is used to give the user additional feedback on the status of the controller and progress during programming.

Sound	Meaning
Four Notes “Low – High – Low – High”	Programming Mode
Two Notes “Low – High”	Confirm Programming Change
Two Notes “High – Low “	Programming Error
Single Short Note “High”	Keyboard Key Push

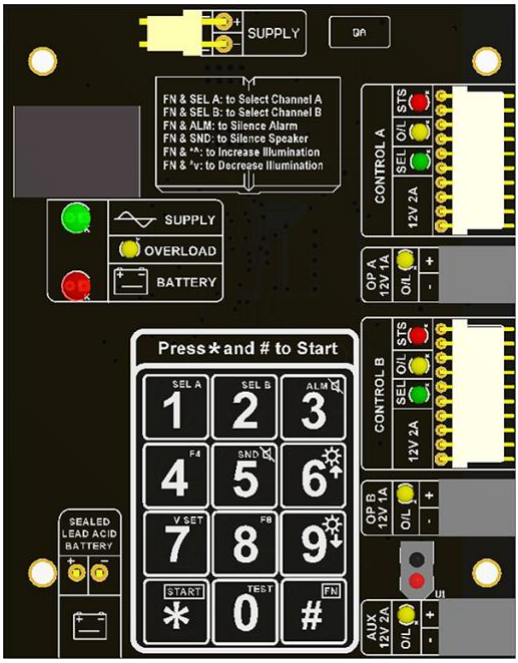
2. PROGRAMMING

UNLOCKING THE KEYBOARD

To enable the keyboard for programming first press * and #. The keyboard will not accept any input until it is enabled.

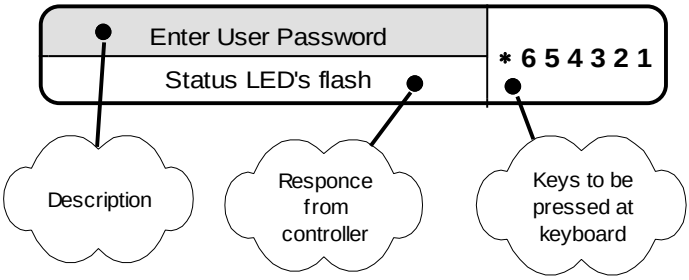
PROGRAMMING

Programming is achieved by entering a password at the keyboard followed by a menu selection code. There are two programming menu's, one for the USER and one for the ENGINEER. Each menu has a separate six-digit password. Depending on the menu option selected, configuration data can then be entered at the keyboard.



The 3004 SIM unit contains a PSU with a programming keypad and one SIM unit. Therefore, the indicators for Control B are not used. Before programming, make sure that the 'SELECTED' indicator for Control A is illuminated. If not press **[#]** and **[1]** keys together. The controller will beep and the 'Control 'A' selected' LED will illuminate.

UNDERSTANDING THE PROGRAMMING FLOW CHARTS



3. USER MENU

The menu functions available and default factory settings are as follows:

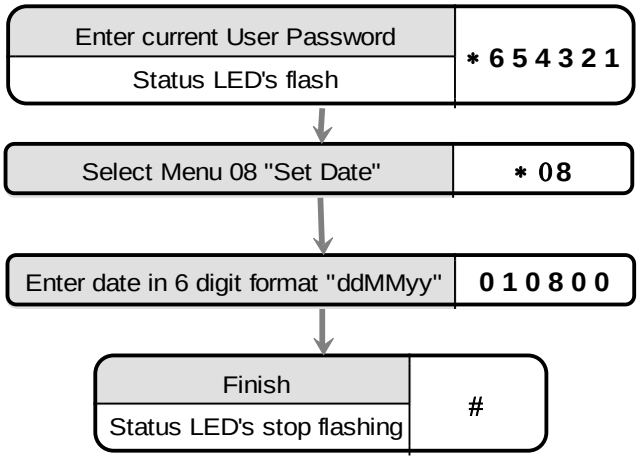
Users Menu #	Description	Default Settings
* 00	User Password	6 5 4 3 2 1
* 03	Day of Week	-
* 08	Set Date	-
* 09	Set Time	-

U08 U09

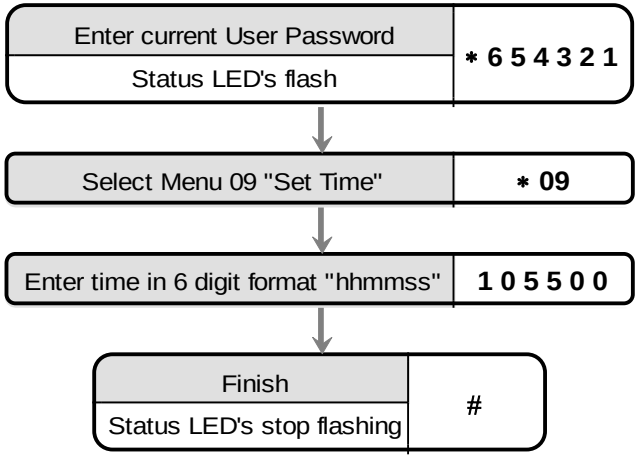
SETTING DATE-TIME

The internal clock of the P3 Controller has three main parameters:

1. Date (010100 = 1st of January 2000)
2. Time (153001 = 3:30:01 pm)


Enter current User Password
Status LED's flash
* 6 5 4 3 2 1
Select Menu 08 "Set Date"
* 0 8
Enter date in 6 digit format "ddMMyy"
0 1 0 8 0 0
Finish
Status LED's stop flashing
#

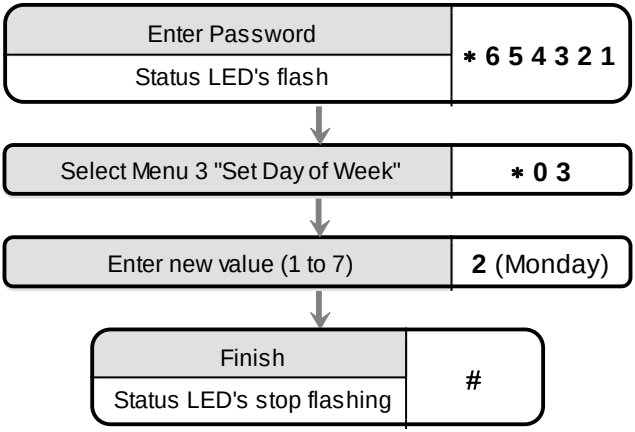
Engineers function 09 allow the time to be set. Allways set the time using 24Hr format.


Enter current User Password
Status LED's flash
* 6 5 4 3 2 1
Select Menu 09 "Set Time"
* 0 9
Enter time in 6 digit format "hhmmss"
1 0 5 5 0 0
Finish
Status LED's stop flashing
#

SETTING THE DAY OF WEEK

The day of week is only important for the daylight savings feature to work correctly. This is because the date rule also uses the day of week to determine when to change the time.

The set the day of week use the Day of Week table below to find the day ID and enter this as a value using the following procedure.



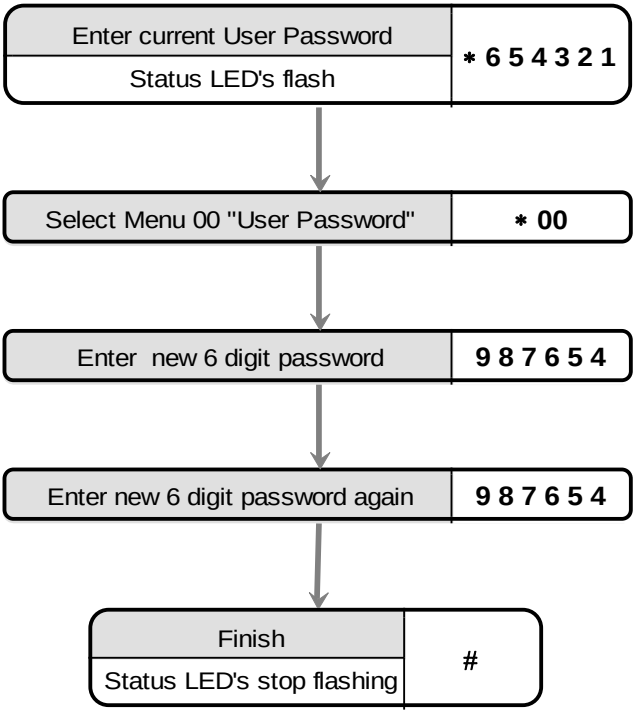
DAY OF WEEK IDENTIFIERS	
DAY OF WEEK	**ID**
SUNDAY	1
MONDAY	2
TUESDAY	3
WEDNESDAY	4
THURSDAY	5
FRIDAY	6
SATURDAY	7

U00

USER PASSWORD

Passwords are the means by which the systems operator gains access to the programming functions. This is a 6-digit number and can be changed by using the following procedure.

Changing the user password


Enter current User Password
Status LED's flash
* 6 5 4 3 2 1
Select Menu 00 "User Password"
* 00
Enter new 6 digit password
9 8 7 6 5 4
Enter new 6 digit password again
9 8 7 6 5 4
Finish
Status LED's stop flashing
#

3. ENGINEERS MENU

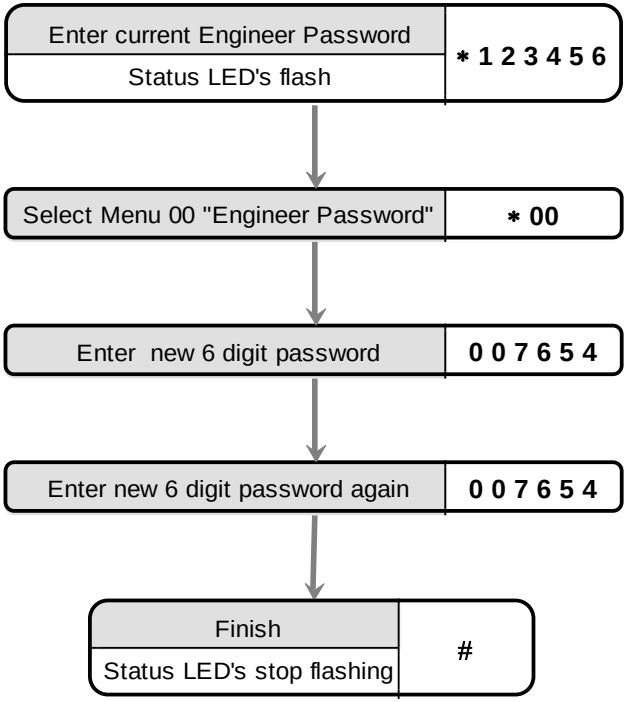
The menu functions available and default factory settings are as follows:

ENGINEERS MENU #	DESCRIPTION	DEFAULT SETTINGS
* 00	Password	1 2 3 4 5 6
* 29	Network Transmit Delay	0
* 99	Reset Default User Password	-

ENGINEERS PASSWORD

The passwords are the means by which the systems operator gains access to the programming functions. This is a 6-digit number and can be changed by using the following procedure.

Changing the Engineers Password

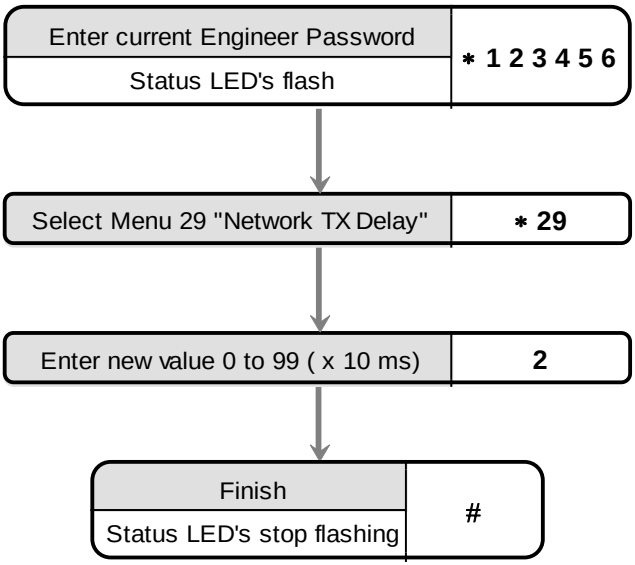

Enter current Engineer Password
Status LED's flash
* 1 2 3 4 5 6
Select Menu 00 "Engineer Password"
* 00
Enter new 6 digit password
0 0 7 6 5 4
Enter new 6 digit password again
0 0 7 6 5 4
Finish
Status LED's stop flashing
#

E29

NETWORK TRANSMIT DELAY

The Network Transmit Delay is used to allow the controller to interface with USB to RS485 converters. The value entered will delay the controller from transmitting an RS 485 network response for 10ms x the value entered.

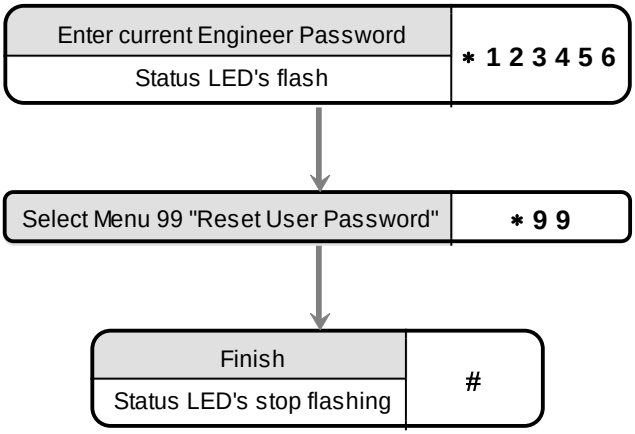
Programming the Network Transmit Delay



RESET USER PASSWORD

It can be useful for the engineer to reset the user password. By entering the engineering menu and select function 99 the Users Password will be reset to the default “654321”

Resetting the Users Password



RESTORING FACTORY SETTINGS

Should you require to "reset the controller" at any time or in the event of the Programming code or being forgotten the factory settings may be restored. To do this push and hold down the push button located in the corner of the control PCB located within the enclosure. Hold this for 5 to 6 seconds. Wait for the RX and TX RS232 LED's to flash. The Controller will now use the factory settings for all codes and timings.

4. INSTALLATION

MOUNTING

The optimum location for the controller depends on the application. As a general Guide:

- Always mount the control equipment on the secure side of the door.
- If the user needs to programme the unit from the keyboard on the front panel, mount at head height in an accessible location with reasonable light.

Offer the opened back of the enclosure up to the wall where the unit is to be mounted and mark the location of the fixing dimples on the wall. Drill and plug the wall. Bring in mains supply and other cables that are to enter via the rear cable access holes. Screw the controller to the wall.

WARNING: Extreme caution must be used when opening the controller housing. DO NOT touch any connections or components other than the reset button. Avoid touching any of the terminations with a metal object such as a wristwatch or jewellery.

POWER

The P3 IO Controller should be connected to a 24 Hour 220/240V mains supply. Ideally a fused spur should be used for this purpose. The cable used to connect the mains supply should be 0.75 to 2mm^2. A fused terminal block is provided for mains, observe the polarity when making these connections.

3004 PSU POWER SUPPLY LOADS (MAXIMUM)

The loads on the PSU terminals are as follows:

PSU Terminal	Connection Type	Current Limit with Resettable Fuse	Voltage
Battery Charger	Spade Terminal	1A	13.8V
Control A	Grey Cable	2A	13.8V
Control B	Grey Cable	2A	13.8V
OP A	Terminal Block	1A	13.8V
OP B	Terminal Block	1A	13.8V
Aux	Terminal Block	2A	13.8V

There are overload LED indicators next to each terminal connection on the PSU.

BUDGETTING

Note that the above table shows the current limit of each connection and does not show the total budget available**. Total available current at any one time is 5A**.

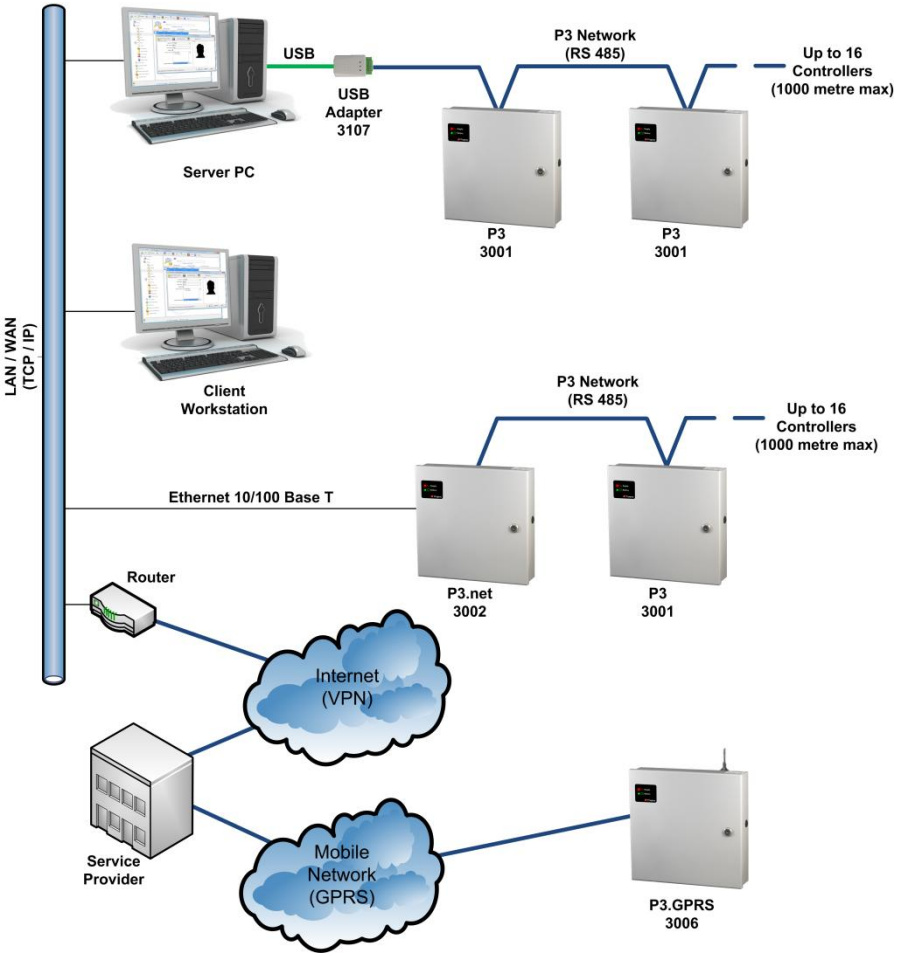
When budgeting for the load it is the **Peak** current values of the devices that will be connected that should be used.

IMPORTANT:

If rechargeable batteries are to be fitted then they must be of the correct type. The power supply is designed to charge sealed lead acid batteries. Do not connect NiCad or Dry Cell batteries.

Power up sequence should be:	**Mains first then Battery**
Power down sequence should be:	**Battery first then Mains**

Hardware System Diagram



NETWORK CONNECTIONS

The network used to link the controllers back to a central point is “RS 485”. This allows half duplex communication and requires a special cable type (Belden 8133, 8132 or equivalent).

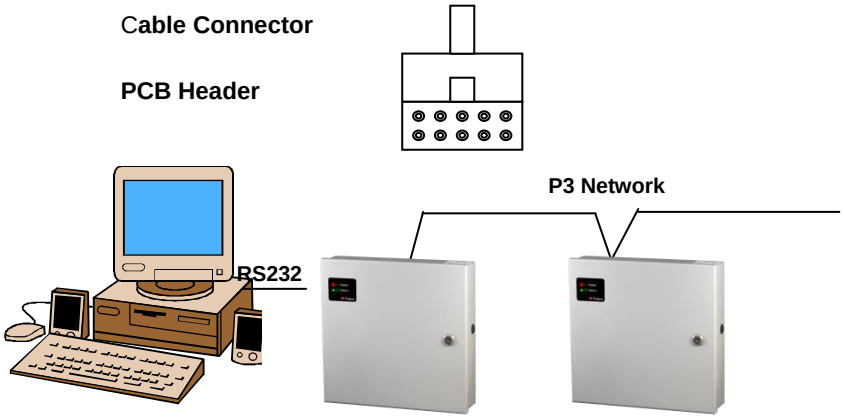
The 8133 has three twisted pairs the 8132 has two pairs with an overall screen and drain wire. When pulling the cable into place, be careful to avoid Fluorescent lighting ballast's and large mains transformers, motors and switchgear. When terminating strip back the cable sufficiently to identify the twisted pairs of cores.

IMPORTANT PLEASE NOTE

It is important to use the colour coding and keep the twisted pairs for connections as shown above. At each door controller the incoming and outgoing screens should be connected together. Connect the drain wires to the chassis earth stud at the first controller only. It is also important the network be one daisy chain with no spurs or loops.

It is important that the Connection of the PC Interface Lead is correct as miss connection can damage the Controller. You will find an arrow on the cable connector, this indicates PIN 1. PIN 1 is also indicated on the controller PCB adjacent to the connection point. The cable will come from the top. Plug On as Illustrated

Be careful of static when handling network and PC cables.



RESET BUTTON

The reset button allows the engineer to perform a factory reset. This resets all parameters to the factory default values.

The reset button needs to be held for 5 seconds to start the reset sequence. The RS232 LED's will display a flashing sequence to indicate the start of factory reset.

CONTROL BOARD LEDS

NETWORK LED's	Meaning
POLL LED Flashing	Data specific to the controller received
DATA LED Flashing	Data on the network
OFF	No Network Activity

RS232 LED's	Meaning
RS23TX LED Flashing	RS2332 Data sent
RS232RX LED Flashing	RS2332 Data received
RS232TX and RS232TX LED Flashing Simultaneously	Board being reset.

RELAY LED's	Meaning
Relay LED on	Relay active
Relay LED off	Relay inactive

SPECIFICATION

CONTROLLER

Dimensions:	310mm, 330mm, 90mm (3004 only)
User password	6 Digits
Engineer password	6 Digits
Keypad Functions	
Dimensions	270mm, 170mm, 50mm (3004-I only)

RELAY OUTPUTS

Output Relays 1 to 16	Normally open, normally closed and common.
Relay contact ratings	2.0 Amps at 30V DC

NETWORK

RS 485 (2 wire)	Half Duplex
Cables	BELDEN 8133, or 8132 1000m max

INPUTS

I to 16	Input connections for voltage free contacts 0V connection

STATUS

Sound	Speaker (48 Ohms min)

PROGRAMMING

User Functions	User Password Date, Time & Day of Week
Engineer Functions	Engineer Password Network Delay Default User Password

POWER SUPPLY

Supply Voltage In	230 V AC
Supply Power	60 VA
Battery Charger	Sealed Lead acid 12V 7Ahr

Quick Reference

USERS MENU		ENGINEERS MENU	
#	DESCRIPTION	#	DESCRIPTION
*00	User Password	*00	Engineers Password
*03	Day of Week		
*08	Set Time		
*09	Set Date		
		*29	Network Transmit Delay
		*99	Reset User Password To Default

Commissioning Information

User Password	
Engineer Password	
Date Commissioned	